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DISTANCE SAMPLING TO ASSESS POST-GRAZING NORTHERN BOBWHITE RECOVERY IN SOUTH TEXAS

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ABSTRACT

Northern bobwhite (*Colinus virginianus*) require habitat structure with substantial grass cover for nesting, predator avoidance, and thermal refuge. During the past 2 decades, many land managers have reduced or completely eliminated livestock across South Texas rangelands with the goal of improving bobwhite habitat. How bobwhites respond to post-grazing habitat recovery is unknown. Our objective is to investigate how bobwhites respond to the vegetative changes following removal of grazing. Our study is being conducted on a private ranch in Jim Hogg County, Texas and involves 3 different areas of post-grazing habitat recovery: a 1,246 ha area rested from grazing for 15 years; a 1,133 ha area rested 3 years from high grazing (7 ha/AU); and a 1,254 ha area rested 3 years from moderate grazing (14 ha/AU). Distance sampling surveys will be conducted on the 3 areas during December 2015 and 2016. Transects will be placed 400 m apart spanning all 3 study. Data collected during these surveys will be used to estimate bobwhite density on the 3 study areas and will be compared between sites and years. We hypothesize that the 15 years post-grazing area will have higher and more evenly distributed bobwhite density than the 3 years post-grazing at high intensity or medium intensity area.

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Key words: *Colinus virginianus*, distance sampling, northern bobwhite, post-grazing recovery, south Texas

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